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# INVESTIGATING THE MEDIATING EFFECT OF GREEN PRODUCT LITERACY ON THE RELATIONSHIP BETWEEN TECHNOLOGY INNOVATIVENESS AND GREEN PRODUCT PURCHASE ATTITUDE

**MUHAMMAD MUNIR[1], MOAZZAM[2]**

## ABSTRACT

The objective of the study was to explore the mediating effect of green product literacy on the relationship between technology innovativeness and green product attitude of the consumer. With growing environmental concern and the increasing emphasis on sustainable practices, understanding of the drivers that influence green purchasing behavior has become increasingly important. The study utilized a survey questionnaire which was distributed to a sample of 424 respondents. SPSS (26.0) software was used to analyze the data. The results of this study revealed that technology innovativeness had a significant positive direct effect on green product purchase attitude ($\beta = 0.72$, $p < 0.001$), and green product literacy played a crucial role in this relationship by having a significant positive indirect effect ($\beta = 0.10$, SE = 0.03, 95% CI [0.05, 0.16]).The descriptive results reveal the significance of green product literacy in shaping consumer attitude and highlight the need for organizations to invest in green literacy programs and initiatives. Investing in green literacy programs to educate and raise awareness of sustainable consumption is important for both researchers and practitioners. Individuals can contribute to SDGs Goal 13 by promoting green product literacy and sustainable practices to ensure a livable future.

**KEYWORDS:** Green product Literacy, Technology innovativeness, Green product Purchase Attitude

## 1. INTRODUCTION

The consumption of resources by humans in recent decades has surpassed all prior records, making the protection of the environment a major concern globally (Barbu et al., 2022).Thus, sustainability has become a key concern for individuals and organizations worldwide(Ahmad et al., 2022), and the growing consciousness regarding human activities' impact on the environment has led to an upsurge in demand for the product of environmental friendly(Chen et al., 2022; Gao et al., 2016). Because of the negative environmental impact of business activities such as deforestation, pollution, and wildlife harm, there is a growing demand for sustainable business practices (Naz et al., 2020).Green products can be achieved through the use of recycling strategies, energy-efficient designs, reduced packaging, and nontoxic materials (Sarkar et al., 2022). These products also known as environmentally friendly or eco-friendly products, are designed to have a low environmental impact throughout their lifecycle from production to disposal (Zeynalova & Namazova, 2022).The concern for environmental issues motivates a considerable number of consumers to show interest in buying eco-friendly products. However, actual green product sales remain below expectations (Kamalanon et al., 2022). As a result, green product marketers need to analyze the drivers that influence green purchase behavior in order to achieve objectives (Kamalanon et al., 2022).

The Sustainable Development Goals (SDGs) developed a 15 years (2015 to 2030) plan in order to minimize poverty and conserve environment ensuring the peace and happy living of human on earth. It was done in coordination of all UN member states ("Goals | Sustainable Development," n.d.). To combat climate change and its effects, urgent action is demanded by Sustainable Development Goal 13Considering that since 1880, the average global temperature has increased by 1.2 degrees Celsius, especially in the late 20th century, the current figures are concerning because it is scientifically proven that our climate is warming rapidly ("Climate Action and Synergies," n.d.). Atmospheric CO2, the GHG responsible for more than two-thirds of global warming, is at an all-time high. Because of this, there have been five times as weather, climate, and water related disasters over the last 50 years, causing over two million fatalities and US$3.64 trillion in losses("Climate Action and Synergies," n.d.).There are many environmental issues in Pakistan, including deforestation, air pollution, a lack of fresh water, and soil degradation (Barati et al., 2023). In recent years, the country has also endured numerous severe climate-related disasters, such as floods, droughts, and heatwaves (Noor et al., 2023; Audi & Ali, 2023).

[1] Corresponding Author, Department of Management & Administrative Sciences, University of Narowal, Pakistan, muhammad.munir@uon.edu.pk
[2] Department of Management & Administrative Sciences, University of Narowal, Pakistan, moazzamnwl@gmail.com

One important factor that may influence green purchase attitude is technology (Juaneda-Ayensa et al., 2016; Yang, 2012). In a consumer sense, technology innovativeness refers to the degree to which consumers regard a product & service to be innovative or technologically advanced. For achieving and maintaining a competitive edge, innovations are extremely vital (Stucki, 2019). Products using disruptive technologies lead to changes in technology innovation and affect customers, markets, and existing technologies in a dynamic way (Grzegorczyk, 2022). Innovative technologies can mitigate negative environmental impacts by improving resource efficiency, pollution control, and waste reduction through advanced processes and materials (Alola & Adebayo, 2023).

Zeynalova and Namazova (2022), suggest to assess the effects of technology change on consumer attitude. Study is aimed at enhancing and evaluating the understanding mediating effect of green product literacy on the relationship between technology innovativeness and green product purchase attitude. According to Grzegorczyk (2022), has shown that technology innovation tend to have a more positive attitude towards green products, but the understanding of how green product literacy plays a role in shaping the attitudes of technology innovativeness towards green products is not well understood yet. The SDGs Goal 13 is closely related to the objective of this study is to examine the mediating effect of green product literacy on the relationship between technology innovativeness and attitude towards purchasing eco-friendly or green products, thereby filling the gap present in the existing literature.

Green product literacy involves a comprehensive understanding of the various aspects of Products that are designed to have the minimum negative impact on the environment as possible while having as much positive impact on sustainability as possible. This includes hands-on experiences with these products, as well as knowledge and understanding of the relevant concepts and challenges (Chen et al., 2022). Green product literacy lays the foundation of beliefs regarding environmental-friendly products and services, providing the knowledge necessary to develop opinions on related issues (Kim & Stepchenkova, 2020).

Individuals are more likely to take action when the outcome of their attitude is positive (Ajzen, 2011). Attitude encompasses a person's perceptions and beliefs about environmentally conscious behaviors or items, such as selecting organic food or opting for green products (Wang et al., 2022). Having favorable consumer attitudes is essential for companies that offer green products, yet the literature highlight the complexity of creating such attitudes (Prakash & Pathak, 2017; Woo & Kim, 2019). This attitude is expressed as a preference for eco-friendly goods a willingness to spend more for sustainable products & services or a general preference for items with low environmental impact.

This study's objective is to determine the extent to which green product literacy acts as a mediating force in the connection between technology innovativeness and the attitude towards purchasing eco-friendly products. This question is important because by understanding the role of technology innovativeness and green product literacy in shaping consumer attitude, this study can inform marketing and policy strategies aimed at promoting eco-friendly products and reducing the environmental impact of consumption.

## 2. LITERATURE REVIEW

This study adopts the theory of planned behavior provided by Ajzen (1991) to evaluate the effect of technology innovativeness on consumer attitude toward green purchase products. Based on the theory of planned behavior concept Ajzen (1991), this study conceptualizes the psychological aspects that customers may consider when making purchasing decisions about green products, such as green product literacy. This study investigates the effect of technology innovativeness and green product literacy on green product purchase attitude.

### 2.1. GREEN PRODUCT PURCHASE ATTITUDE

The attitude of a consumer is how they judge services and goods (Ajzen, 1991). If consumers perceive a higher value and have a more favorable attitude toward green products, they will be more likely to purchase green items. It was shown that respondents' attitudes toward green products and purchasing intentions were influenced by product types and perceived benefits (Liao et al., 2020). Consumers will become more informed through essential environmental knowledge and information, trying to influence a good attitude and purchasing intention (Shimul et al., 2022).

### 2.2. GREEN PRODUCT LITERACY

Kim and Stepchenkova (2020) stated that learning about experience and awareness of a variety of environmentally friendly products, ideas, information, and issues are all components of green product literacy. A person is said to have a green product literacy if they have a general understanding of the reality and ideas around eco-friendly, green products and the ecosystem that surrounds them. Some consumers find it challenging to recognize green products; as a result, green product literacy or understanding is required to do so (Chen et al., 2022). The development of beliefs on a particular issue affecting green goods and services can be encouraged by knowledge or literacy about green products(Majeed et al., 2022).

### 2.3. TECHNOLOGY INNOVATIVENESS

Agarwal and Prasad (1998) defined technology innovativeness as "the willingness of individuals to try out any new technology" in order to explain personal innovativeness in the field of technology. Innovativeness is frequently measured by how quickly a new good or service is adopted relative than others (Rogers et al., 2014). Green products usually utilize environmentally friendly elements as in the use of recyclable materials, non-toxic compounds, and biodegradable

technologies (Stucki, 2019). Innovation is a key factor in consumers' willingness to try new products, thus it has been extensively researched in a different filled of research and one of them is consumer behavior (Goldsmith & Hofacker, 1991).

### 2.4. EFFECT OF TECHNOLOGY INNOVATIVENESS ON GREEN PRODUCT LITERACY

Consumers who believe a product is innovativeness may also consider it is more efficient or useful, increasing their willingness to acquire the product(An et al., 2023). This information-seeking behavior can lead to a higher level of green product literacy, as individuals who are more technologically innovative are more likely to seek out information about green products and their benefits (Felicetti et al., 2023). With the help of technology, customer literacy abilities can be enhanced(Almgren Bäck et al., 2023). Thus, the study proposed that:

$H_1$: Technology innovativeness positively effects on green product literacy.

### 2.5. EFFECT OF GREEN PRODUCT LITERACY ON GREEN PRODUCT PURCHASE ATTITUDE

Consumer entire decision-making process can be affected by knowledge (Wang et al., 2019). Through instruction, educational initiatives, workshops, or real-world experience, the general public can learn about environmental-related concerns. Consumer attitudes toward purchasing environmentally friendly items may be influenced by their knowledge of green products (Biswas, 2020). Earlier literature has demonstrated a link between consumer attitudes about buying green products and knowledge (Liobikienė & Poškus, 2019). According to Joshi and Rahman (2015), Consumer attitudes toward green product purchases may be influenced by their knowledge of green products. According to Chen et al. (2022)green product literacy is one of the most important driver that influences consumer purchase attitude. Thus, the study proposed that:

$H_2$: Green product literacy positively affects green product purchase attitude.

### 2.6. EFFECT OF TECHNOLOGY INNOVATIVENESS ON GREEN PRODUCT PURCHASE ATTITUDE

According to Hasheem et al. (2022), research has found that technology innovativeness has a notable impact on consumers' attitudes towards purchasing green products. Consumers who are more technology innovativeness have a more attraction towards green products (Kamalanon et al., 2022). The Technology Acceptance Model (TAM) suggests that consumers' perceptions of a new technology's features and newness are key factors that affect their attitudes and behaviors towards adopting it (Saleem et al., 2022).

$H_3$: Technology Innovativeness positively affects green product purchase attitude.

### 2.7. MEDIATING EFFECT OF GREEN PRODUCT LITERACY ON TECHNOLOGY INNOVATIVENESS AND GREEN PRODUCT PURCHASE ATTITUDE

Green product literacy serves as a relationship between technological innovation and green product purchase attitude. Consumers with higher levels of green product literacy may be more willing to evaluate the environmental effect of their purchase decisions and may be more open to innovative green technologies. Technologically innovative individuals are more favorable to seek out information, be exposed to new technologies and have a higher level of green product literacy, which results a more positive attitude towards green products. Thus, the study proposed that:

**$H_4$:** Green product literacy mediates the effect of technology innovativeness on green product purchase attitude.

The following theoretical model is used in this study and quantitative approach used to evaluate theories and variables. This model illustrates the green product literacy mediates the effect of technology innovativeness on green product purchase attitude**.**

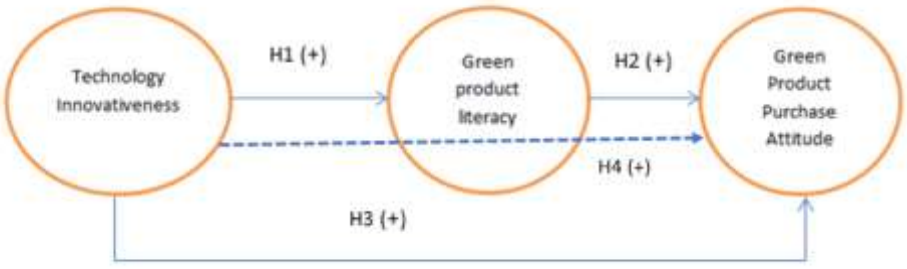


**Figure 1: Conceptual Model**

## 3. RESEARCH DESIGN

### 3.1. PROCEDURE

For the current study, a cross-sectional survey research design was used to achieve its objectives. Fink (2003) stated that the survey strategy is about collecting information about people's attitude, behavior and knowledge. According Sekaran

and Bougie (2016)whenever data about people's attitude, behavior and knowledge is concerned, a survey strategy is the best option. In this research, the researchers have used a questionnaire to collect data about technology's effects on green consumer purchase attitudes. So, a survey strategy was best suited to the objectives of current research. This study employed a random sampling approach in selecting its participants.

The current study's variables were measured using scales that had already been developed in the previous literature and separated into two sections. Section A providing an overview of the demographic characteristics of male and female consumers and Section B evaluating green product literacy, technology innovativeness, and green product purchase attitude. Technology innovativeness scales was adopted from the study of Parasuraman and Colby (2015). Green product Literacy scales was adopted from the study of Liobikienė and Poškus (2019). Green product purchase attitudes scales was adopted form the study of Dhir et al. (2021).To evaluate the responses of the participants, the researcher employed a 5-point Likert scale ranging with options from strongly disagree to strongly agree. The researcher collect data from the students through a questionnaire. Because students are likely to be more receptive to new technology advancements and show an inclination towards environmental concerns, making them a fitting group to investigate. The unit of analysis is the individual. This research would be done in a non-contrived setting with minimal involvement in the normal routine. 450 questionnaires were distributed among students and424 responses were received with 94.22% response rate. In this study, researchers used stratified random sampling to ensure that our sample is representative of the overall population. The universities in Pakistan are known for their academic excellence and research capabilities, which make them significant contributors to the country's economic and social development. However, due to the large number of universities in Pakistan, it is essential to divide them into subgroups to ensure that the sampling process is effective to achieve the objectives of this study. Table 1 represents the number of universities in each subgroup.

**Table 1: The number of universities in Pakistan**

| Charted by the Govt. | No. of Universities |
|---|---|
| KP | 38 |
| Federal | 47 |
| Punjab | 77 |
| Baluchistan | 11 |
| AJK | 07 |
| Gilgit Baltistan | 02 |
| Sindh | 67 |
| Total | 249 |

For the purpose of this study, researchers have selected only the universities in the Punjab province for data collection, which include 77 universities in total. The reason for selecting only Punjab universities is that Punjab has the highest number of universities among all provinces of Pakistan, making it a suitable and representative sample for this study. Additionally, universities in Punjab have a wide range of academic programs and research facilities, which enabled us to collect comprehensive data for our research. Researcher further classified these universities into two subgroups: public-sector universities and private-sector universities, with 44 and 33 universities, respectively.

The researcher ensures representative data collection by selecting a proportional number of public and private universities. The researchers collected data from 30% of universities in each subgroup (14 public and 10 private), using a random number generator tool to ensure unbiased selection. After selecting the specific universities to include in the sample using a random number generator tool, the researcher then collected data from the universities using a dis-appropriate stratified random sampling technique. This technique helped us to ensure that the sample was representative of the overall population of the universities, even if the size of each subgroup is unknown.

### 3.2. TECHNIQUE OF ANALYZING DATA

In this study, the data from the 424 respondents was entered into SPSS (26.0) and analyzed both individually and as a group. The use of descriptive statistics to evaluate the level of Green Product Literacy, Technology Innovativeness, and Green Product Purchase Attitude through measures such as mean, skewness, kurtosis, maximum and minimum values. Cronbach's Alpha, Pearson correlation, and regression analysis were used to investigate the relationship between these variables.

### 3.3. PROFILE OF SAMPLE

Table 2 presents a summary of the respondent’s demographic profiles based on various criteria. An analysis that is descriptive was performed to gather information about the respondents' demographic profiles. According to Table 2, out of 424 participants, the gender distribution showed that 57% were male and 43% were female. A significant disparity was observed in the age group, with 79% of the participants being below 26 years of age. A significant number of the respondents had a well educational background, with 74% possessing a degree of bachelors, 13% holding an master's degree, 7% holding an M.Phil degree, and 10% owning an intermediate certificate.

**Table 2: Characteristics of respondents**

| Sample characteristics | Categories | Frequency | %of respondent |
|---|---|---|---|
| Gender | Male | 240 | 57 |
| | Female | 184 | 43 |
| Age | 18-22 years | 64 | 15 |
| | 22-26 years | 336 | 79 |
| | 26-30 years | 24 | 6 |
| | 30-40 years | 0 | 0 |
| | Over 40 years | 0 | 0 |
| Level of education | Intermediate | 44 | 10 |
| | Bachelor | 296 | 70 |
| | Master | 56 | 13 |
| | M.Phil. or Above | 28 | 7 |

## 4. RESULTS

### 4.1. NORMALITY TEST

The normality of the data was assessed using a normality test. The findings showed that the skewness of all variables was within the range of ±1 and the kurtosis was within the range of ±3, which indicated that the data was normally distributed.

**Table 3: Descriptive analysis**

| | | GPA | GPL | INN |
|---|---|---|---|---|
| N | Valid | 424 | 424 | 424 |
| Mean | | 3.5377 | 3.4214 | 3.3538 |
| Median | | 4.0000 | 4.0000 | 3.5000 |
| Skewness | | -.819 | -.579 | -.460 |
| Std. Error of Skewness | | .119 | .119 | .119 |
| Kurtosis | | -.551 | -1.358 | -.507 |
| Std. Error of Kurtosis | | .237 | .237 | .237 |
| Minimum | | 1.00 | 1.00 | 1.25 |
| Maximum | | 5.00 | 5.00 | 5.00 |

### 4.2. RELIABILITY TEST

Cronbach's alpha evaluates the internal consistency of a scale's items, which has scores ranging from 0 to 1, with a higher number indicating greater consistency. Based on the classification guidelines established by George and Mallery (2003) a score greater than 0.7 would be considered acceptable.

**Table 4: Reliability Statistics**

| Construct | Item | Cronbach's Alpha |
|---|---|---|
| Green Product Purchase Attitude | GPA1<br>GPA2<br>GPA3 | .863 |
| Green Product Literacy | GPL1<br>GPL2<br>GPL3 | .936 |
| Technology Innovativeness | INN1<br>INN2<br>INN3<br>INN4 | .701 |

Table 4 displays the Cronbach's alpha values for Green Product Purchase Attitude, Green Product Literacy, and Technology Innovativeness as .836, .936, and .701 respectively. Since all of these values are higher than 0.70, the reliability of the data and the variables can be considered sound.

### 4.3. PEARSON CORRELATION ANALYSIS

A technique for examining the relationship between variables is correlation. With the help of the Pearson correlation, two variables' relationships are evaluated for strength and significance.

**Table 5: Correlation**

| | | GPA | GPL | INN |
|---|---|---|---|---|
| GPA | Pearson Correlation | 1 | | |
| | Sig. (2-tailed) | | | |
| | N | 424 | 424 | |
| GPL | Pearson Correlation | .444** | 1 | |
| | Sig. (2-tailed) | .000 | | |
| | N | 424 | 424 | |
| INN | Pearson Correlation | .670** | .466** | 1 |
| | Sig. (2-tailed) | .000 | .000 | |
| | N | 424 | 424 | 424 |

**. Correlation is significant at the 0.01 level (2-tailed).

#### 4.3.1. RELATIONSHIP BETWEEN TECHNOLOGY INNOVATIVENESS AND GREEN PRODUCT LITERACY

A Pearson correlation analysis was done to evaluate the relationship between Technology Innovativeness and Green Product Literacy. The outcome of the analysis revealed a moderately positive linear relationship between the two variables, with a 0.446 Pearson correlation value. Additionally, the significance level of 0.000 indicated that the association was statistically significant.

#### 4.3.2. RELATIONSHIP BETWEEN GREEN PRODUCT LITERACY AND GREEN PRODUCT PURCHASE ATTITUDE

A Pearson correlation analysis was done to evaluate the relationship between Green Product Literacy and Green Product Purchase Attitude. The analysis revealed a moderately positive linear association between the Green Product Literacy and Green Product Purchase Attitude, as evidenced by a Pearson correlation value of 0.444. Moreover, the statistical significance level of 0.000 indicated that the relationship was significant. This finding suggests that individuals who possess higher levels of Green Product Literacy exhibit a more favorable attitude towards making green product purchases.

#### 4.3.3. RELATIONSHIP BETWEEN TECHNOLOGY INNOVATIVENESS AND GREEN PRODUCT PURCHASE ATTITUDE

A Pearson Correlation analysis was done to evaluate the relationship between Technology Innovativeness and Green Product Purchase Attitude, a Pearson correlation analysis was conducted. The result of the analysis indicated a moderate positive linear association between the two variables, as indicated by a Pearson correlation value of .670. Additionally, the statistical significance level of .000 showed that the relationship was statistically significant. According to this, individuals who have greater levels of Technology Innovativeness have a tendency to exhibit more positive attitudes towards purchasing green products.

**Table 6: Regression Analysis**

Outcome: GPL

Model Summary

| R | R-sq | MSE | F | df1 | df2 | p |
|---|---|---|---|---|---|---|
| .4662 | .2173 | 1.4464 | 117.1620 | 1.0000 | 422.0000 | .0000 |

Model

| | coeff | se | t | p | LLCI | ULCI |
|---|---|---|---|---|---|---|
| constant | 1.0447 | .2272 | 4.5980 | .0000 | .5981 | 1.4913 |
| INN | .7087 | .0655 | 10.8241 | .0000 | .5800 | .8373 |

The regression equation is: GPL = 1.0447 + 0.7087 * INN

For the outcome "GPL", the Model Summary shows that the model has a R value of .4662 and an R-squared value of .2173, which means that 21.73% of the variation in GPL can be accounted for by the predictor variable INN. The model is statistically significant as a result of the mean squared error of 1.4672, the F-statistic of 117.1620, and the p-value of less than.0000. The Model table shows the coefficients and their corresponding t-values, standard errors, p-values, lower and upper confidence intervals. The coefficient for INN is .7087, with a t-value of 10.8241 and p-value of less than .0000, suggesting that it is a significant predictor of GPL. This indicate that technology innovativeness is a significant predictor of Green Product Literacy and researcher expect that green product literacy will rise by 0.7087 units for every unit that technology innovativeness rises.

**Table 7: Outcome: GPA**

Model Summary

| R | R-sq | MSE | F | df1 | df2 | p |
|---|---|---|---|---|---|---|
| .6866 | .4714 | .6323 | 187.7254 | 2.0000 | 421.0000 | .0000 |

Model

| | coeff | se | t | p | LLCI | ULCI |
|---|---|---|---|---|---|---|
| constant | .6503 | .1539 | 4.2241 | .0000 | .3477 | .9529 |
| GPL | .1349 | .0322 | 4.1900 | .0000 | .0716 | .1981 |
| INN | .7234 | .0489 | 14.7836 | .0000 | .6272 | .8196 |

The regression equation of is: GPA = .6503 + .1349 * GPL + .7234 * INN

The model summary of the outcome of green product literacy indicate that model has R value is 0.6866 and R-squared value is .4714, indicate that the variance in green product purchase attitude by the predictor of Green Product Literacy and technology innovativeness. The model is statistically significant as the mean squared error is 0.6323, the F-statistics is 187.7254 and the value of P is less than 0.0000. The coefficients and their corresponding standard errors, value of both t, P and lower and upper ranges are shows in the model table. Green product literacy and technology innovativeness had coefficients of 0.1349 and 0.7234 respectively with the value of t is 4.1900 and 14.7866 and value of p is 0.0000 and 0.0000 respectively, indicate that they are significant predictor of green product purchase attitude. This indicate that technology innovativeness is a significant predictor of green product purchase attitude and increase in technology innovativeness by one unit researcher expect to increase in green product purchase attitude is 0.7234 units.

**Table 8: Direct effect of X on Y**

| Effect | SE | t | p | LLCI | ULCI |
|---|---|---|---|---|---|
| .7234 | .0489 | 14.7836 | .0000 | .6272 | .8196 |

Indirect effect of X on Y

| | Effect | Boot SE | BootLLCI | BootULCI |
|---|---|---|---|---|
| GPL | .0956 | .0265 | .0488 | .1545s |

Direct effect of X on Y

The direct effect of the predictor variable X on the outcome variable Y shows the influence of X on Y while controlling for any indirect effects through other variables. In this study, the direct effect of INN on GPA was analyzed and found to be 0.7234 with a standard error of 0.0489, a t-value of 14.7836, and a p-value of 0.0000. These results indicate that INN has a statistically significant positive direct effect on GPA, and for each unit increase in INN, there is an expected increase of 0.7234 units in GPA. The direct effect has a 95% confidence interval of 0.6272 to 0.8196.

Indirect effect of X on Y

The indirect effect of X on Y represents the impact of X on Y through one or more mediator variables. In this case, the mediator variable is Green Product Literacy (GPL). The indirect effect of INN on GPA through GPL is .0956, with a bootstrapped standard error of .0265 he 95% confidence interval for the indirect effect ranges from .0488 to .1545, suggesting that INN has a significant positive indirect effect on GPA through GPL.

In summary, both the direct and indirect effects of INN on GPA are significant, indicating that INN has a significant impact on GPA, both directly and through its impact on GPL.

## 5. DISCUSSION

This study's aim was to examine how green product literacy mediates the link between technology innovativeness and attitude towards purchase green products. The findings support earlier studies by demonstrating a significant and favorable relationship between technology innovativeness and green product purchase attitude(Hasheem et al., 2022; Kamalanon et al., 2022). These findings suggest that individuals who are more innovative in their use and adoption of new technology are also more positive and favorable attitude towards purchasing green products.

Moreover, the results indicated that green product literacy partially mediates the relationship between technology innovativeness and green product purchase attitude. This finding suggests that individuals who are more innovative in their use of technology may also be more likely to be knowledgeable about green products and their benefits. This, in turn, may positively influence their attitude towards purchasing green products. These findings are consistent with previous research that has emphasized the importance of green product literacy in influencing consumers' attitudes towards green products (Biswas, 2020; Matin et al., 2021).

It is significant to note that the effect size for the relationship between technology innovativeness and green product purchase attitude was moderate, whereas the effect size for the indirect effect of technology innovativeness on green product purchase attitude through green product literacy was small. These results suggest that although technology innovativeness is a crucial factor in shaping consumers' attitudes towards green products, the impact is somewhat limited, and other factors may also significantly influence consumer behavior.

## 6. CONCLUSION AND LIMITATION

In nutshell, this study's objective was to examine and explore at the mediating effect of green product literacy on the relationship between technology innovativeness and green product purchase attitude. This study's findings are valuable insights into the role of green product literacy in shaping consumer behavior and highlight the importance of investing in green literacy programs and initiatives. The findings suggest that individuals who are more technologically innovative are more favorable to have a positive attitude towards purchasing green products, but that this relationship is strengthened by a higher level of green product literacy. By promoting green product literacy and encouraging the adoption of sustainable practices, individuals can contribute to the achievement of SDGs Goal 13 and ensure a livable future for generations to come.

### 6.1. APPLIED RECOMMENDATIONS

The implication of this study is both for researchers and practitioners. For researchers, it provides a deeper understanding of the drivers that effect on consumer behavior as well as the relationship between technology innovativeness, green product literacy and attitude toward green product purchase. For practitioners, it emphasizes the need to invest programs and projects that promote green product literacy in order to inform and raise awareness toward sustainable goods among consumers. By encouraging consumers to adopt environmentally conscious behaviors and promoting eco-friendly products, this can help organization in creating a more sustainable future. Additionally, organization can use marketing strategies that highlight the attributes of green products as well as the advantages to society and environment. As a results, this help to foster positive attitudes toward green products and increase their likelihood being adopted by consumers. Academic institutions may also contribute to the effort by including sustainability and eco-friendly consumption into their courses and activities. Students, who are expected to be early adopters of green products, will benefit from having a higher level of understanding about green products.

In conclusion, this study underscores the importance of green product literacy in shaping consumer behavior and highlights the need for organizations to invest in green literacy programs and initiatives. The results of this study can inform future research and guide organizations in their efforts to promote and market sustainable products to consumers.

This study is limited by factors such as limited time, resources, and a small sample size for data collection. However, it presents opportunities for future research to explore the role of social influence as a moderator. An additional limitation of the study is the need for a larger sample size or the implementation of multistage random sampling techniques.

**Conflicts of Interest**

The authors declare no conflict of interest.

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